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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/713,887

Filing Date: November 14, 2003

Appellant(s): KNEBEL ET AL.

**MAILED**

AUG 3 / 2006

**GROUP 2800**

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Erik Swanson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed March 27, 2006 appealing from the Office action

mailed September 19, 2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2872

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-12 and 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hakamata (US 5,065,008).

Regarding claims 1 and 12, Hakamata discloses a scanning microscope having a detector (25), arranged in a detection beam path (Fig. 1), for receiving detection light proceeding from a sample (20) and an optical shutter (23) means between the sample and the detector with which the detection beam path can be blocked (col. 7 lines 54-67) and the detection beam path is automatically blockable when the light power level of the detection light exceeds a definable threshold (col. 8 lines 31-39). Hakamata states that when the light is not directed to a certain location on the shutter means, thus the light power level exceeds a minimum threshold; the shutter is closed at that location.

Regarding claims 3 and 14, Hakamata discloses a descanning detector (Fig. 1).

Regarding claims 4 and 15, Hakamata discloses a control means for controlling the shutter means (col. 8 lines 31-39).

Regarding claims 5 and 16, Hakamata discloses the detection beam path can be automatically opened up before the beginning of a scanning operation and blocked at the end of a scanning operation (col. 8 lines 31-39).

Regarding claims 8 and 17, Hakamata discloses a means for monitoring the light power level of the detection light and extrapolates future change over the time in the detection light power level (col. 8 line 61 – col. 9 line 7). Hakamata states that as the scanning progresses the

shutter can get out of sync with the scanning process and can then be adjusted, thus anticipating changes in the power level with relation to the shutter means over time.

Regarding claims 9 and 18, Hakamata discloses the shutter means contains an LCD element (col. 7 lines 54-56).

Regarding claims 10 and 19, Hakamata discloses the detector contains a photomultiplier (col. 7 lines 54-56).

Regarding claims 11 and 20, Hakamata discloses the scanning microscope is a confocal scanning microscope (col. 7 lines 10-13).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hakamata (US 5,065,008) in view of Hanninen (US 5,523,573).

Hakamata teaches the invention as claimed but lacks reference to the use of a non-descan detector. Hanninen teaches a microscope having a detector (CCD) arranged in a detection beam

path (Fig. 5) for receiving detecting light proceeding from a sample (N1) and an optical shutter (S1) means between the sample and the detector for which the detection beam path can be blocked (Fig. 5). Hanninen further discloses the detector is a non-descan detector (Fig. 5). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Hakamata invention include a non-descan detector for the purpose of detecting light reflected by the sample.

#### **(10) Response to Argument**

Applicant argues the Hakamata reference does not control the liquid crystal shutters (23a) “based on the light power level of the detection light exceeding a definable threshold.” The term exceed means, “to extend outside of,” (Merriam-Webster’s Collegiate Dictionary Tenth Edition). The threshold that is exceeded does not have to be a maximum threshold that is surpassed, but could also be a minimum threshold which the intensity drops below. Hakamata uses the lower threshold to open only the shutters where the light is currently located. The claim does not require that the shutters be dynamically responsive to the light based on any type of feedback control. The claim requires only the light blockage be based on the level of detection. In Hakamata, when the light power level is below the power level of the light beam provided by light source (10) all light is blocked. Further the controller (32) control where the light will be based on movement of the mirror (16) and which shutters are opened and closed through controller (24) and is also connected to the detector (25) through circuit (26; Fig. 1). Still further the Hakamata reference teaches the liquid crystal shutter is synchronized with the

Art Unit: 2872

scanning operation of the light (col. 8 lines 48-60). Therefore, due to the synchronization, the shutters are operated based on the electronic detection of the control system to determine when the light is at a certain location.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Joshua L. Pritchett



Conferees:

Drew Dunn 

Ricky Mack 



**DREW A. DUNN  
SUPERVISORY PATENT EXAMINER**